

# GEOTHERMAL ENERGY

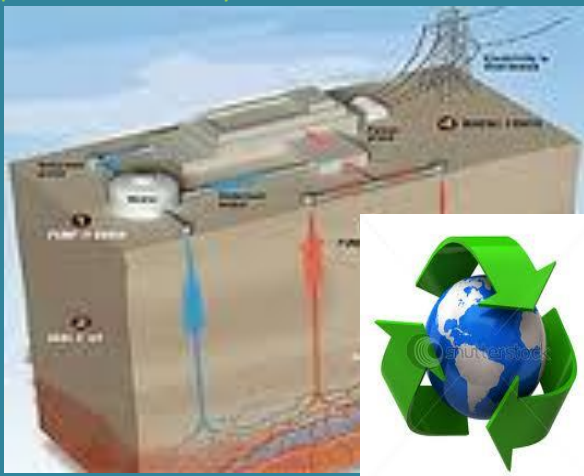
By Logan Parker and Lawrence Lipka



Lawrence Lipka  
3/29/2012

## HOW IT WORKS

Super-heated water in pressurized form from underground is piped to a geothermal generating station. Once the water is released from the pressure it turns into steam that the steam turns the turbine. The turbine then turns the generator and then the generator produces electricity.



## THE ADVANTAGES AND DISADVANTAGES OF GEOTHERMAL ENERGY

### Advantages

The environmental benefit of geothermal energy is it is a renewable source of energy. It has helped stop global warming and reduce pollution.

Significant cost saving: geothermal energy generally involves low running costs since it saves 80 percent of the fossil fuel we use today. No fossil fuel is used to generate the power.

### Disadvantages

It is Not Widespread Source of Energy

Since, this type of energy is not widely used therefore the unavailability of equipment, staff, training pose to the installation of geothermal plants across the globe. Geothermal energy is suited to Particular Regions. It is only suitable for regions where temperature below the earth is quite low and can produce steam over a long period of time. For this great research it's required to be done by the companies

before setting up the plant. It May Release Harmful Gases. Geothermal energy contains some poisonous gases and they can escape deep within the earth, through the holes drilled by the constructors. That would cause bad things to the earth.



## History

Archaeological evidence shows that the first human use of geothermal resources in North America occurred more than 10,000 years ago with the settlement of Paleo-Indians at hot springs.

In 1904 an Italian scientist Piero Ginori Conti invented the first geothermal electric power plant in which steam was used to generate the power.

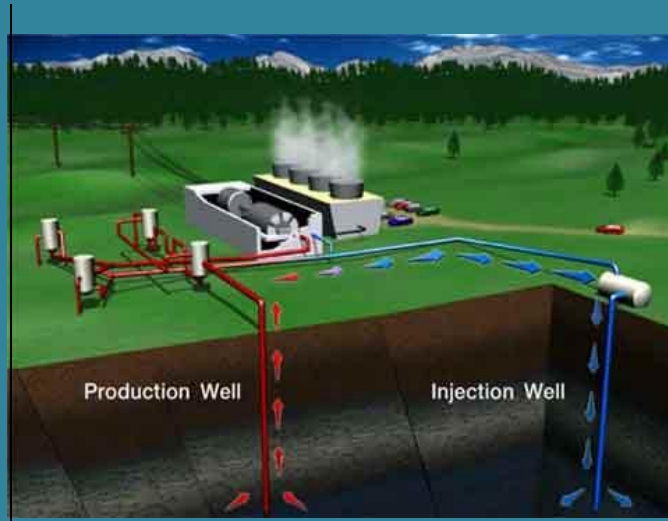
## Other applications

Other uses for geothermal energy are heating green houses for growing agricultural products in a cold or icy climate. Geothermal waters can be used to create heat in buildings or to prevent streets from freezing over.

Drying Lucerne (alfalfa) using geothermal energy was pioneered in Ōhākī in the 1970s. Geothermal heat from the Ōhākī power station has been used to make high-protein pellets to feed stock and to process dried juice into a protein concentrate. A timber-drying operation on site produces fence posts and poles, mainly for the local farming industry.

The Tasman Pulp and Paper Mill uses geothermal steam in heat exchangers to heat kiln air to 140°C for timber drying.

Geothermal waters are used for heating greenhouses on a small scale (covering 10 hectares in total), especially for the commercial, out-of-season production of vegetables, flowers and fruit. This includes a large greenhouse (0.8 hectares) for growing orchids for export, and another set up to grow capsicums with heat from the Kawerau geothermal field.



This picture shown here is showing the pipe on the right injecting water into the hot rocks underground turning the water into steam which rises through the production well spinning the turbine and creating electricity.

## Citations

<http://tourismplacesworld.blogspot.com/2011/06/geyser.html>

<http://www1.eere.energy.gov/geothermal/history.html>

[http://www.energy-daily.com/reports/Google\\_org\\_Invests\\_In\\_Breakthrough\\_Geothermal\\_Energy\\_Technology\\_999.html](http://www.energy-daily.com/reports/Google_org_Invests_In_Breakthrough_Geothermal_Energy_Technology_999.html)

[http://www.conserve-energy-future.com/Advantages\\_Disadvantages\\_GeothermalEnergy.php](http://www.conserve-energy-future.com/Advantages_Disadvantages_GeothermalEnergy.php)

<http://www.envirocitizen.org/article/what-is-the-history-of-geothermal-energy/1012.html>

<http://www.shutterstock.com/pic-61578760/stock-photo-recycle-symbol.html>

<http://www.greenlivinganswers.com/archives/178>

<http://www.teara.govt.nz/en/geothermal-energy/4>

<http://www.top-alternative-energy-sources.com/what-is-geothermal-energy.html>

<http://www.top-alternative-energy-sources.com/what-is-geothermal-energy.html>